CLAIMS

What is claimed is:

- A method for viewing a vessel in an image with a three-dimensional volume, comprising the steps of:
- (a) determining in the view plane of said image a plurality of boundary pairs defining said vessel;
 - (b) determining at least one vessel-intensity for each one of said boundary pairs; and
 - (c) viewing in the projection plane of said image said plurality of boundary pairs and said associated vessel-intensities.
 - 2. The method as set forth in claim 1, further comprising the step of determining and viewing at least one context-intensity in the area surrounding each one of said plurality of boundary pairs.
- 3. The method as set forth in claim 1, further comprising the step of fine-tuning said boundary pairs and said vessel-intensities.
 - 4. The method as set forth in claim 1, further comprising the step of filtering said boundary pairs.
 - 5. The method as set forth in claim 1, further comprising the step of specifying a minimum boundary pair in case a boundary pair is close to zero.

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- 6. The method as set forth in claim 1, further comprising the step of estimating a boundary pair using neighboring boundary pairs.
- 7. The method as set forth in claim 1, further comprising the step of including a calcium region located near said boundary pairs in said determination of said boundary pairs.
- 8. The method as set forth in claim 1, further comprising the step of excluding a bone region located near said boundary pairs from said determination of said boundary pairs.
 - 9. A method for viewing a structure of interest in an image with a three-dimensional volume, comprising the steps of:
 - (a) selecting a start-point and an end-point encompassing said structure of interest in a plane of said image; and
 - (b) for each of a plurality of pixels defined in said plane

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- (i) projecting a line in the view direction of said plane,
- (ii) determining a boundary pair defining said structure of interest along said line,
- (iii) determining a first intensity for said structure of interest enclosed by said boundary pair,

- (iv) determining a second intensity for structures surrounded by said boundary pair,
- re-determining said boundary pair using said first intensity and said second intensity,
- (vi) re-determining said first intensity for said re-determined boundary pair, and
- (vii) assigning said re-determined first intensity and said re-determined boundary pair to said pixel associated with said line.
- 10. The method as set forth in claim 9, further comprising the step of determining at least one context-intensity in the area surrounding said boundary pair.

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- 11. The method as set forth in claim 9, further comprising the step of filtering said boundary pairs.
- 12. The method as set forth in claim 9, further comprising the step of specifying a minimum boundary pair in case a boundary pair is close to zero.
 - 13. The method as set forth in claim 9, further comprising the step of estimating a boundary pair using neighboring boundary pairs.
 - 14. The method as set forth in claim 9, further comprising the step of excluding one or more boundary pairs based on a threshold.

- 15. The method as set forth in claim 9, further comprising the step of estimating a boundary pair using neighboring boundary pairs.
- The method as set forth in claim 9, further comprising the step of including a calcium region located near said boundary pair in said determination of said boundary pair.
 - 17. The method as set forth in claim 9, further comprising the step of excluding a bone region located near said boundary pair from said determination of said boundary pair.
 - 18. A method of generating a movie of a structure of interest, comprising the steps of:
 - (a) defining a plurality of image projection planes;

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- (b) for each one of said projection planes determining a plurality of boundary pairs defining said structure of interest in the view plane associated with said projection plane;
- (c) determining at least one intensity for said structure of interest associated with each one of said boundary pairs;
- (d) defining said view of said structure of interest by said plurality of boundary pairs and said associated intensities determined in each of said plurality of projection planes; and
- (e) sequencing through said plurality of projection planes.

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19. The method as set forth in claim 18, further comprising the step of determining and viewing at least one context-intensity in the area surrounding each one of said plurality of boundary pairs.

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